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ABSTRACT

The conventional response to the financial crisis facing higher education is to increase tuition or request larger legislative appropriations. Another response, however, is possible--the wider use of cooperative education or work-study plans. There are three distinct advantages to work-study plans: (1) learning takes place in less costly settings than the classroom, the laboratory, and the library; (2) the capacity of the physical plant can be used to serve more students; and (3) the increased enrollment can be served without proportionate increases in costs. This paper discusses the calendar and financial operations of: (1) the conventional model extending over a nominal 9-month period; (2) the 4-quarter work-study model; all based on a student enrollment of 1000, a faculty of 100, $2,100 tuition, and a median faculty salary of $14,000. (AF)

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MANAGEMENT DIVISION
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The Advantages of Work-Study Plans

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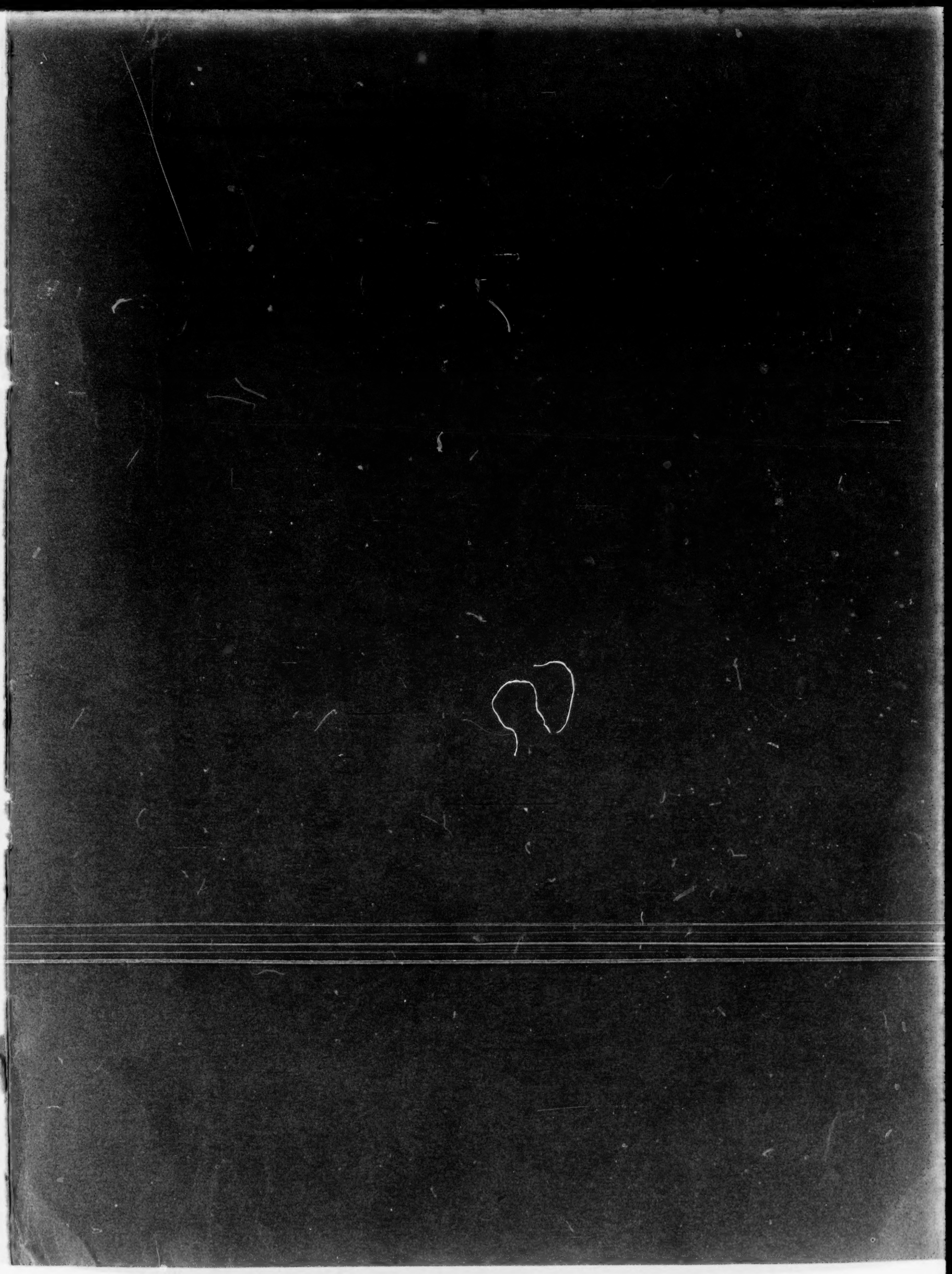


The Advantages of Work-Study Plans

By Morton A. Rauh
Vice President, Emeritus
Antioch College

Work-study plans have now been in use for more than half a century. Yet in more than 2,000 colleges and universities, only about 200 use some form of co-operative education. How come?

No one really knows. The best answer probably lies in the astonishing capacity of higher education to resist change.

The financial bind that is just about universal in the educational community may change all this. So far, the only response to increasing educational costs is higher tuition or larger legislative appropriations.

Another response, however, is possible — the wider use of co-operative education. Work-study plans have demonstrable financial advantages over conventional academic programs, as a comparison of two co-op models with a conventional model will show.

This financial advantage may be the impetus to wider acceptance of co-operative education.

Where the advantages lie

Work-study plans gain their financial leverage from three major premises.

1 Learning takes place in less costly settings than the classroom, the laboratory and the library.

At the same time, work experience tests classroom learning, and classroom participation is enlivened by work experience.

2 The capacity of a physical plant can be used to serve more students.

With a portion of the student body off campus all the time, an equivalent increase in enrollment is possible. If the academic year is extended to a full calendar year, still more students can be accommodated.

3 The increased enrollment can be served without proportionate increases in costs.

Since costs under co-op plans do not rise in direct proportion to the larger number of students and the longer academic year, an increase in productivity is possible.

Prejudices and preconceptions

Familiarity with and total acceptance of the conventional program and scheduling may have bred certain prejudices and preconceptions.

1 *How many years for a degree?* Although accrediting agencies avoid stating their standards in terms of credits and contact hours, higher education continues to equate the undergraduate degree to 4 academic years each comprising about 30 weeks in the classroom. Therefore, it is frequently assumed that a co-op plan with about 22 weeks in the classroom must require 5 years to earn the degree. That assumption is not necessary. The learning experiences away from the campus may be more important than those on campus. This fact can be recognized by giving academic credit for independent study projects taking place during work periods. Thus co-op plans need not require longer than 4 years, although some students may need or prefer 5 years. At Antioch, where the co-op plan has functioned continuously for 50 years, there is strong evidence that the academic excellence of its graduates results from the plan, not in spite of it.

2 *Student vacations.* The four-quarter work-study calendar (Exhibit A-II) shows a total of four weeks of vacation per year. Although that is longer than most students are likely to enjoy for most of their working lives, questions still are raised as to the adequacy of this time off. One answer is that students welcome the organization of the entire year in place of the mad scramble for summer jobs. Another answer is that the degree requirement need not demand that all off-campus periods be devoted to work. The student has the alternatives of vacation, travel, or independent study.

3 *Faculty load.* Increased productivity does not require an increase in faculty course load or time under either of the work-study models presented. In the case of the trimester plan (Exhibit A-III), the number of acadmic weeks is the same as for the conventional model (Exhibit A-I).

In the four-quarter plan, it is assumed the faculty will work three out of four quarters. This requires that some faculty take time off in other than the summer months. Many come to prefer this. Another feature enjoyed by some teachers is that, by taking the spring quarter in one academic year and the summer quarter in the next, they can gain six continuous months off duty.

THE CONVENTIONAL MODEL

The conventional academic calendar, whether divided into two parts (semesters) or three parts (trimesters), extends over a *nominal* nine-month period from about mid-September to early June. It is important, however, in considering the academic equivalence of the work-study plans, to bear in mind the significance of the word "nominal."

A typical nine-month academic year seldom encompasses 39 weeks of classroom activity. Allowing for vacations and examination periods, the actual classroom contact may come closer to 30 weeks.

The operating figures for a hypothetical college using each of the three types of academic programs—the conventional, the four-quarter work-study and the trimester work-study—are presented in Table I. The conventional model, with which the work-study models are compared, is based on the following assumed data:

Enrollment	1,000
Faculty	100
Tuition	$ 2,100[1]
Median faculty salary	$ 14,000[2]

[1] The median tuition for 1969-70 for the twelve member colleges of the Great Lakes Colleges Association.

[2] Includes fringe benefits. Figure taken from Table 8, Committee Z: *The Annual Report on the Economic Status of the Profession, 1969/70.* American Association of University Professors, April, 1970.

In preparing Table I, certain other conventions were used:

1 Income and expenses are made equal. While many colleges operate at a deficit, they do so by meeting current expenses with non-current income. If the hypothetical college were operating at a loss, then one would have to read into the "other income" line appropriations from non-current sources to balance income with expense.

TABLE I
FINANCIAL OPERATION

	Conventional Model *		Four-Quarter Work-Study Model **		Trimester Work-Study Model ***	
	$	%	$	% Increase (over conventional)	$	% Increase (over conventional)
Income						
Tuition	2,100,000	70	4,200,000	100	3,000,000	42.9
Endowment	300,000	10	300,000	0	300,000	0
All other	600,000	20	600,000	0	600,000	0
Total Income	3,000,000	100	5,100,000	70	3,900,000	30
Expenses						
Administration	240,000	8.0	255,500	6.5	245,000	2.1
Student Affairs	165,000	5.5	217,500	31.8	177,500	7.6
Public Information & Services	170,000	5.7	181,000	6.5	177,500	4.4
General Institutional	115,000	3.8	126,500	10.	120,000	4.3
Instruction	1,490,000	49.7	2,135,000	43.3	1,635,000	9.7
Libraries	145,000	4.8	188,500	30.	145,000	0
Operations & Maintenance	500,000	16.7	550,000	10.	500,000	0
Student Financial Aid	175,000	5.8	350,000	100.	265,000	51.4
Total Expenses	$3,000,000	100.0	$4,004,000	33.5	$3,265,000	8.8

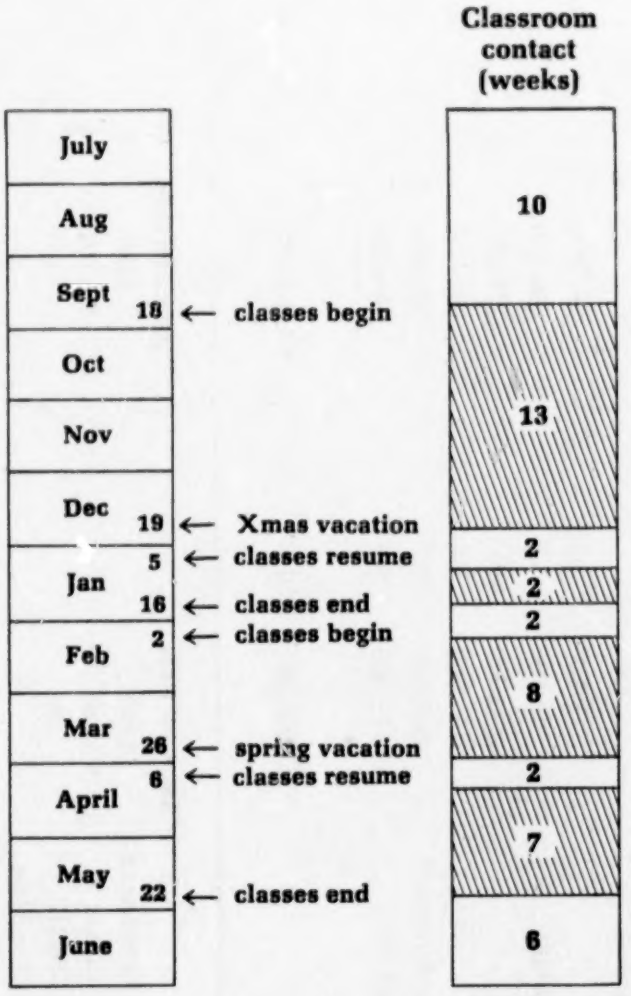
	*Assumed Data	**Assumed Data	***Assumed Data
Enrollment	1,000	2,000	1,500
Tuition	$ 2,100	$ 2,100	$ 2,000
Faculty	100	133	100
Classroom Work-study Faculty	— 0 —	11	8
Median Faculty Salary	$14,000	$14,000	$14,000

study
work
special projects
vacations

EXHIBIT A

ACADEMIC CALENDAR

I
Conventional Model



II
4 Quarters

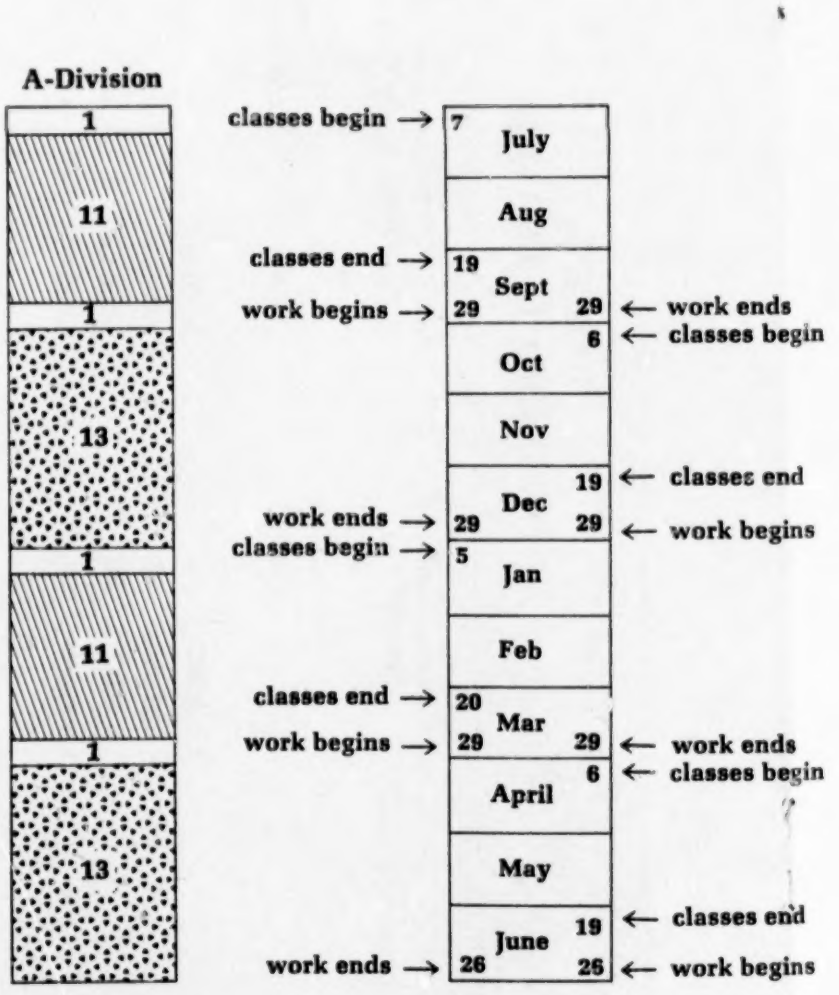
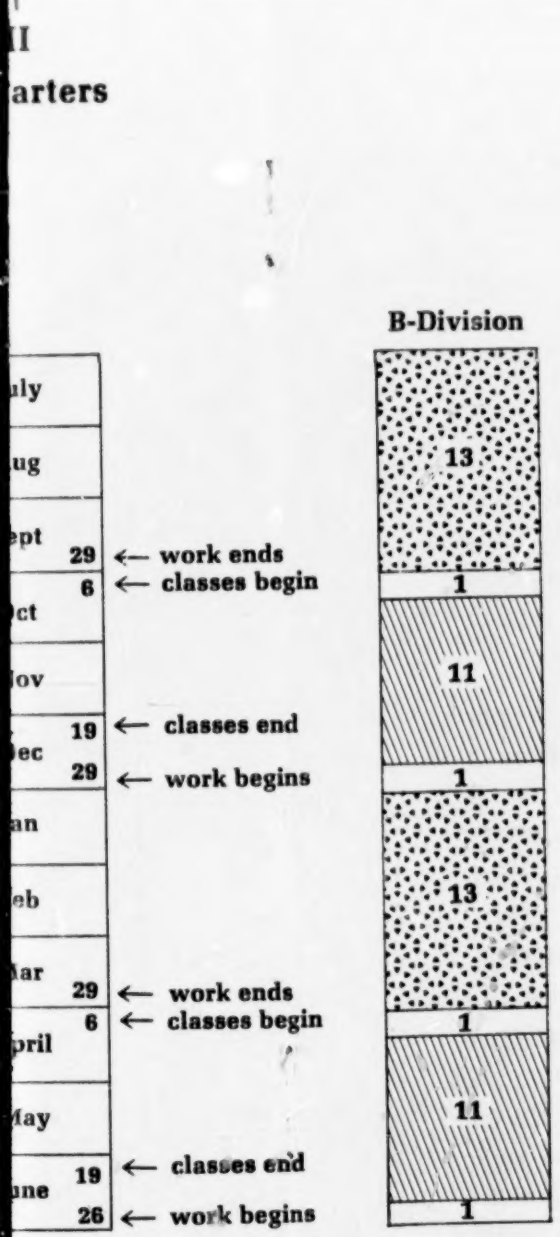


EXHIBIT A

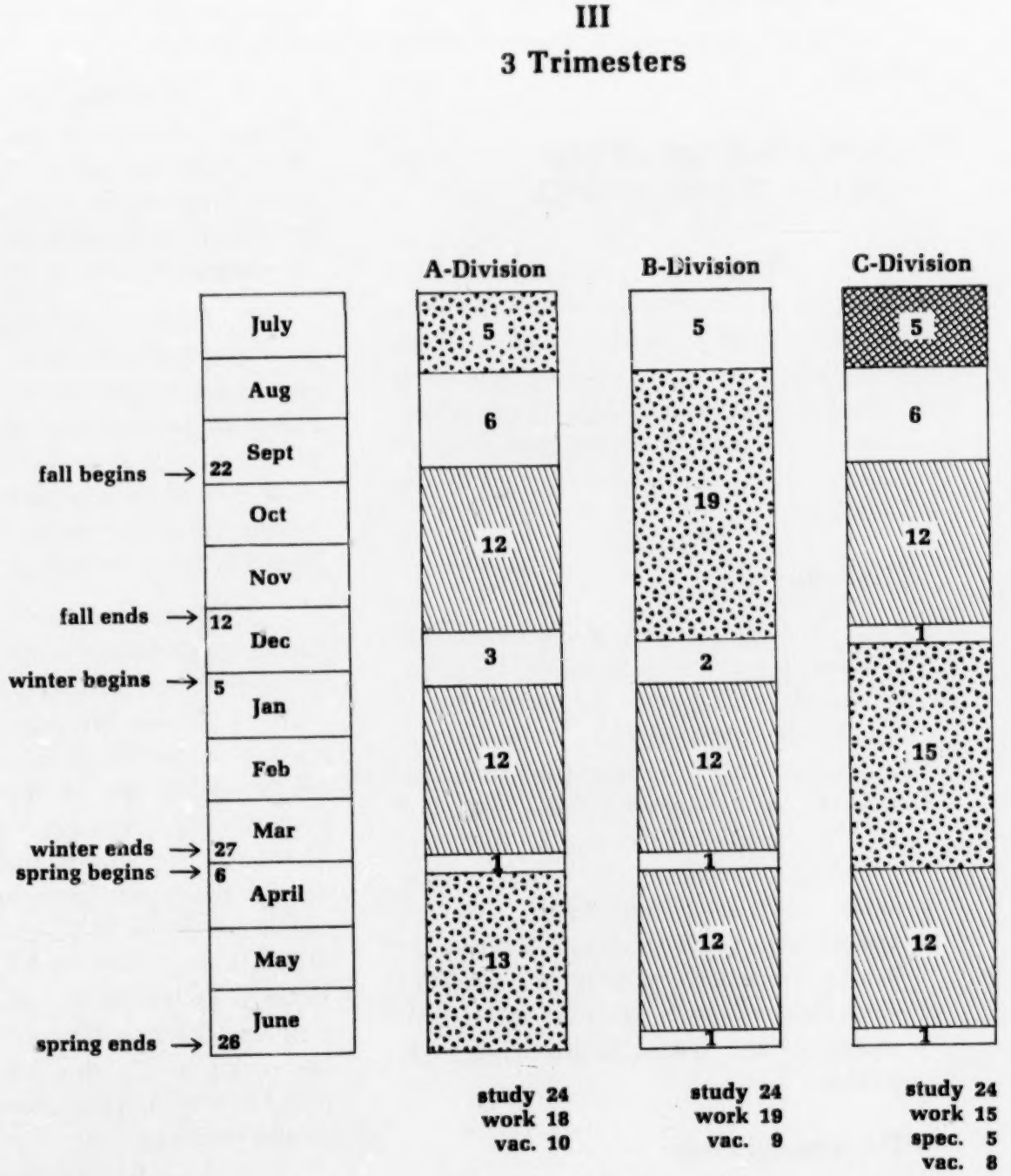
ACADEMIC CALENDAR

Work-Study Models

II
arters



III
3 Trimesters



2 The expense distribution is taken from *The Sixty College Study—A Second Look* (National Federation of College and University Business Officers Association, 1960). These percentages are used for illustrative purposes, and all models presented use the same distribution percentages.

THE FOUR-QUARTER WORK-STUDY MODEL

A calendar divided into four quarters most easily accommodates alternating periods of work and study. In order that these units be long enough to provide a substantive experience in both work and study, the four-quarter model requires year-round operation of the institution.

The calendar

This arrangement provides the fullest possible use of educational facilities. It allows two separate student bodies to use a single physical plant, a single faculty, and a single administrative organization. An example of such a dual operation is shown graphically in Exhibit A-II.

The two student bodies are designated "A-Division" and "B-Division" respectively. Each division studies 22 weeks, has approximately one week of vacation at each of four "division changes," and works approximately 26 weeks.

The financial model

The financial operation of the four-quarter work-study program, set forth in Table I, can be compared easily with the conventional model, and the areas, amounts and percent of increased cost can be identified.

In preparing this model we make a number of assumptions, which need to be understood in order to effect the transition from the conventional to the work-study model.

1 *Enrollment.* The capacity of the plant in the conventional model is 1,000. The enrollment under the four-quarter co-op program, therefore, is set at 2,000, since half the student population will be off campus.

2 *Faculty.* Assuming no increase in faculty load, the faculty of 100 in the conventional model must be increased by one-third to man four quarters. With a faculty of 133, each teacher works three quarters and has one quarter off. In other words, his work year is the same length as under the conventional program.

3 *Work-study staff.* The major organizational change is the establishment of a department to handle the work phase of the program. The size of this staff is directly related to the placement policies of the institution. In some co-op plans employment is confined to the immediate vicinity of the college, and these jobs are for the most part permanent. (Two students equal one full-time employee.) A student may stay with one employer throughout his undergraduate years and progress through increasingly responsible positions. In this situation, a staff member may handle a case load as large as 400 students.

At the other extreme, if jobs are scattered throughout the country, and placements as short as three months, the case load must be smaller.

For purposes of the four-quarter

model, a case load of 200 students is assumed, requiring a professional staff of ten. A co-op faculty member will deal with 100 students in each division. To provide each member with a month of vacation, the staff is set at 11 instead of 10.

Since clerical assistance and travel are required, the average faculty salary of $14,000 is increased by $4,000 to cover these supporting costs.

4 *Increased expenses.* The effect of a doubled enrollment under a work-study plan must be carefully estimated. For example, costs of the president's office will probably not change. On the other hand, assuming the same standards of student financial aid, this cost will double. Maintenance and operation of plant will increase somewhat due to the summer activity. Libraries will require added personnel for the longer school year, but the costs of books and periodicals will increase very little.

Some important understandings

The size of the predicted surplus for the four-quarter work-study model is bound to produce some skepticism. This reaction is not entirely groundless. The plan and its financial projections are based on the principle that education can and does take place outside the classroom. The plan is not a curtailed and segmented academic year with jobs filling in the gaps between periods of academic study. The educational whole combines on- and off-campus experiences. Only if this principle is accepted can one justify charging the same tuition for a co-op year as for a conventional academic year. If the view is taken that tuition should be reduced proportionately to the weeks on campus, then both the financial and educational advantages get lost.

Another caveat must be stated. Expenses tend to creep up on income, so the financial advantages at the outset of the change may not hold indefinitely.

THE TRIMESTER MODEL

For a variety of reasons, the concept of year-round operation may be undesirable or unacceptable. A work-study plan can be devised to fit into a conventional academic year, although it requires some irregularities in scheduling.

The calendar

This plan divides the academic year into three trimesters. Students study two out of three periods. The remainder of the calendar year is devoted to work, vacation, and for some students, special projects. The student body is divided into three divisions, instead of two as in the four-quarter plan. The sequence of work and study, shown graphically in Exhibit A-III are summarized below:

Division	Fall	Winter	Spring
A	Study	Study	Work
B	Work	Study	Study
C	Study	Work	Study

Because only one-third of the total enrollment is available for work at one time, the number of jobs that can be filled on a year-round basis is smaller than in the four-quarter model, and since the entire enrollment is off campus during the 12 summer weeks, the plan entails longer vacations. In order to equalize the off-campus experience of C-division students, provision is made for their engag-

ing in special projects during half the summer, and allowance for the costs of such a program is made in the financial statement.

The financial model

Table I shows the financial operations under the trimester work-study plan, in comparison to the four-quarter and conventional models. In drawing the trimester model some new assumptions need to be made.

1 Capacity of the plant is again taken at 1,000. With 500 students in each of three divisions, the total enrollment is 1,500.

2 The faculty work year is essentially the same as under the conventional model, and no additional classroom faculty is required.

3 Assuming a case load of 500 students, as in the four-quarter plan, eight co-op faculty are necessary.

4 New estimates of expense increments are required. In this model the total enrollment is larger than in the conventional model, but the resident population and the weeks in residence are the same. Thus admissions office expense would increase but plant maintenance and operation would not.

5 In order to retain the essential concept of work and study as a total educational experience, some consideration should be given to the fact that the student is directly involved in the program for about five weeks less under the trimester model than under the four-quarter plan. Accordingly, the tuition has been reduced about five percent, or $100, in computing the total tuition income.

OTHER CONSIDERATIONS

Dormitories

A large portion of most dormitory budgets is not related to the length of time the plant is in operation; for example, debt service, insurance, building maintenance, and utilities.

Consequently, in four-quarter calendars the man-weeks of income-producing occupancy may be as much as one-third larger than for the conventional academic year, while expenses increase by a smaller proportion. The trimester calendar does not have this advantage.

Costs to students

Three variables make it difficult to compare student costs of work-study and conventional programs.

1 *Length of program.* Probably the most important differential is the length of time required for a student to earn a degree. Clearly, five years will cost more than four, although job earnings help to offset the difference.

2 *Character and location of the co-op jobs.* Some of the jobs best suited educationally to work-study pay the least. Nevertheless, students who need money for college expenses can and do earn it on co-op jobs. How much depends on the kind and location of the job. A student working in a production job and living at home will clear substantially more money than a teaching assistant in a distant city, whose earnings may pay only for transportation, living expenses and amusements.

3 *Vocational relationships.* In many co-op institutions, there is a strong em-

STUDENT COSTS

	Conventional	Four-Quarter Co-op
Income		
Summer work	$ 500 [1]	
Co-op job		$ 1,560[2]
Expenses		
Job expense	100 [3]	780[4]
Tuition	2,100	2,100
Room and board	1,100 [5]	800[6]
	$ 3,300	$ 3,680
Net cost per year	$ 2,800	$ 2,120
Net cost for four years	$ 11,200	$ 10,600

[1] 10 weeks @ $50.

[2] 26 weeks @ $60, net after taxes. Based on average Antioch co-op wage 1968-69 of $77. gross.

[3] 10 weeks @ $10.

[4] 26 weeks @ $30.

[5] Median of 34 colleges per Oberlin College survey 3/31/69.

[6] Median cost reduced by 1/4 to reflect 24/32 wks. in residence.

phasis on continuity of employment. This means that the student will continue with a single employer and earn progressively higher wages as he moves through increasingly responsible jobs. There is also a strong possibility that he will remain with the employer after graduation at a considerable advantage over the graduate just beginning work.

Bearing in mind these uncertainties, we can estimate the relative costs to the student under the conventional model and the four-quarter work-study model as shown above.

Student demand and enrollment

It is apparent that the financial advantages to the institution of both co-op models derive from increased enrollment using the same physical plant. To capture the benefits, the college must be able to fill these places without lowering the caliber of the students admitted.

Fortunately, the work-study plan is in itself an attractor of applicants. Colleges with well-conceived co-op programs find that students enroll because of the plan. The student values:

a) the independence of being on his own;

b) the variety of learning experience;
c) the opportunity to develop his vocational plans and aspirations in a realistic work situation;
d) the privilege of changing his career plans if he becomes disenchanted by first hand experience; and
e) the release from the parochialism of campus environment, especially if the job exposes him to a new geographic area.

All is not gold

Although the virtues of cooperative education have been proven, no college administrator should consider instituting a work-study plan without taking a realistic look at the problems of implementation and the possible side-effects.

1 Can you recruit the increased student body to justify enlarging the staff and plant capacity? Fortunately, the plan itself attracts many prospective students.

2 Can you hire the professional staff with the skill to implement the plan? Unfortunately, there are no formal training programs that turn out people with the specialized competence to match students with jobs, counsel students in job performance, and relate their work to their academic experiences. Recruiting a qualified staff takes a good deal more scouting than is needed to fill most academic positions.

3 Can you find the right jobs for students? An array of jobs suited to the student body and the education program is indispensable. This is more than a problem of numbers. The jobs must be tailored to the young people who hold them as an educational experience rather than as a means of earning a living. The work must be progressively more challenging and must be supervised by employers who are as interested in education as they are in hiring inexpensive labor or in recruiting future personnel. Trustees with corporate connections can be a big help.

4 Are parents and alumni still clinging to the concept of the college as a custodial institution? It takes some merchandising to convince parents that their children are capable of living on their own in a work situation. And for those who regard work-study as "working your way through college," the concept may fall short of their aspirations of upward mobility.

5 How adaptable are the faculty? Their resistance to change can be one of the most serious obstacles to the introduction of cooperative education. Since the work-study plan entails major modifications of the curriculum, its success demands faculty participation and cooperation.

Conclusion

A recent report of the Carnegie Commission for Higher Education stressed the importance of offering high school graduates more options for the continuation of their education. The work-study plans presents such an option.

At the same time, it offers institutions of higher education some relief from the financial crunch that all colleges are experiencing. While the difficulties of conversion from a conventional academic program to cooperative education should not be taken too lightly, the advantages to be gained will in many cases warrant the effort of the undertaking.

MD

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ACADEMY FOR EDUCATIONAL DEVELOPMENT, INC.

Dear Colleague:

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These are the questions dealt with in this second set of materials supplied to you by the Academy's Management Division information program. (Generous support from the W. K. Kellogg Foundation and other donors enable us to provide these materials free to all four-year college presidents and to a limited number of other key people in higher education, such as yourself.)

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* THE ADVANTAGES OF WORK-STUDY PLANS. In addition to helping balance your budget, work-study can attract capable students who need a chance to earn their way, and make education more relevant for all students.

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